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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,802	08/17/2001	Jon Hall	IN-5521	5868

26922 7590 05/16/2003

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#8

EXAMINER

PAULRAJ, CHRISTOPHER

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/932,802

Applicant(s)

HALL ET AL.

Examin r

Christopher G. Paulraj

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-14,16-41 and 43-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-14,16-41 and 43-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The amendment filed on April 22, 2003 has been entered. Claims 1-4, 6-14, 16-41, and 43-70 are pending. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

Claims 1-4, 6-14, 16-41, and 43-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tatsuya et al. in view of Ramsden (U.S. PG-Pub 2002/0019312), Spencer et al. (U.S. Patent 6,242,056), Murayama et al. (U.S. Patent 5,424,006), Schimmel et al. (U.S. Patent 5,585,427), and Zhao et al. (U.S. Patent 6,036,999).

Tatsuya et al. does not specifically disclose that the phosphorescent pigment can be included within the clear coat of the composite film structure or that retroreflective microspheres can be included within the layers. However, Ramsden. discloses a multilayer structure wherein phosphorescent pigments can be mixed with at least one transparent and/or translucent material to form a clear coat (paragraphs 42-44). One skilled in the art would therefore have found it obvious to include phosphorescent pigments in the top layer of the composite structure of Tatsuya et al. The motivation for doing so would have been to provide maximum exposure of the phosphorescent pigment to the external light source. In accordance with the teachings of Spencer et al., one skilled in the art would also have found it obvious to incorporate retroreflective microspheres in the structure of Tatsuya et al. The motivation for doing so would have

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been to dissipate and scatter the light source within the coating layer to produce maximum exposure of the light to the phosphorescent pigments.

Tatsuya et al. also does not disclose the specifically claimed phosphorescent pigments or phosphorescent properties required by the instant claims. However, Murayama et al. discloses a phosphorescent phosphor that can be $\text{SrAl}_2\text{O}_4:\text{Eu}$, meeting the instant claim requirements (see abstract, figures 1-7). One skilled in the art would have found it obvious to incorporate such pigments into the layers disclosed by Tatsuya et al. The motivation for doing so would have been to improve the after-glow properties of the coating layer. Since the materials disclosed in the prior art are the same as that disclosed in the present specification, the examiner takes the position that the claimed DOI and phosphorescence properties will inherently be the same. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Tatsuya et al. also does not specifically disclose that the mixture can be prepared using cowles blades or grinding media. However, the use of such techniques to produce pigment dispersions is known in the art (see Schimmel et al., col. 10, lines 9-14; Zhao et al., abstract). One skilled in the art would have found it obvious to use such techniques to form pigment dispersions in the structure of Tatsuya et al. The motivation

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for doing so would have been to optimize the dispersability and particle size of the pigments.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Paulraj whose telephone number is (703) 308-1036. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

cgp
May 14, 2003


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700